SPRING GUIDE

Brand	Rider's weight*	Spring	Spring rate
	kg/pounds		N/mm
Yamaha YZF 250	70/154	08763-44	4,4
	75/165	08763-44	4,4
	80/176	08763-46	4,6
	85/187	08763-46	4,6
	90/198	08763-46	4,6
	95/209	08763-48	4,8
Yamaha YZF 450	70/154	08763-44	4,4
	75/165	08763-46	4,6
	80/176	08763-46	4,6
	85/187	08763-48	4,8
	90/198	08763-50	5,0
	95/209	08763-52	5,2

* Rider's weight: Rider wearing all riding equipment

MAINTENANCE

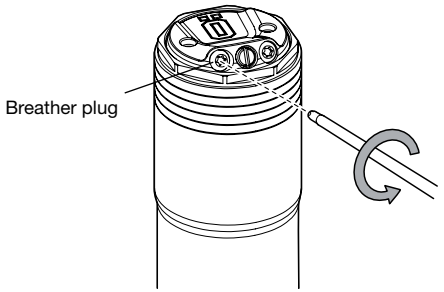
Preventive maintenance and regular inspection reduces the risk of functional disturbance.

Breather plug

Make sure to ventilate the front fork at regular intervals:

1. Put the motorcycle on a workstand so that the front wheel is off the ground.

2. Loosen the breather plug to release the excess pressure in the front fork.



Recommended Service Intervals

Every 25 hours. Make your service and maintenance according to Öhlins Work shop manual.

Disposal

Discarded Öhlins products should be handed over to an authorized Öhlins workshop or distributor for proper disposal.

07296-50_1 FGYA 893/ FGYA 894 Issued 2008-07-11 Öhlins Racing AB Annette Asph/ Jonas Mossberg

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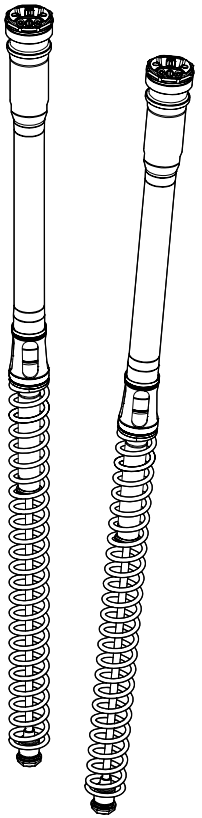
Phone +46 8 590 025 00. Fax +46 8 590 025 80.
www.ohlins.com

Owner's Manual/ Mounting Instructions

Öhlins front fork kit FGYA 893/ FGYA 894 for Yamaha YZF 250/ 450 2008



Recommended tools

Tool STD OEM top-cap tool
Tool 20 mm socket (bottom plug)
Tool 12 mm socket (shaft end adjuster housing)
Tool Pliers for the security snap-ring

Please read before installing

Öhlins Racing AB cannot be held responsible for any damage to the front fork kit, vehicle or injury to persons, if the instructions for fitting and maintenance are not followed exactly. Similarly, the warranty will become null and void if the instructions are not adhered to. This kit should only be installed by an authorized Öhlins dealer. The installation procedure requires certain tools. Before installing this front fork kit, please check the contents of the kit, listed below. If any part is missing, please contact your Öhlins dealer.

Kit Contents

Front fork kit FGYA 893/894	(1)
Sticker "TTX Cartridge"	00191-29 (2)
Sticker "Öhlins"	00197-01 (2)
O-ring	00338-10 (2)
O-ring	00438-12 (2)
Base plug TTX FG	15430-03 (2)
Circlip	15440-01 (2)
Spacer 2 mm	15443-02 (2)
Spacer 3 mm	15443-03 (2)
Owner's Manual/Mounting Instr.	07296-50 (1)

NOTE!

Oil and spring kit need to be ordered separately. For correct spring rate see spring guide recommendation.
Use Öhlins fork oil only 01311-xx.

In this manual

Safety precautions
Mounting instruction
Set-up data
Adjustments/ Diagram: Oil volume - Force
Spring guide/ Maintenance

SAFETY PRECAUTIONS

Safety signals

Important information concerning safety is distinguished in this manual by following notations:

⚠

This Safety alert symbol means: Attention! Your safety is involved!

⚠ WARNING!

Failure to follow warning instructions could result in severe or fatal injury to anyone working with, inspecting or using the suspension, or to bystanders.

CAUTION!

Caution indicates that special precautions must be taken to avoid damage to the suspension.

NOTE!

This indicates information that is of importance with regard to procedures.

⚠ WARNING!

1. Installing a front fork kit, that is not approved by the vehicle manufacturer, may affect the stability of your vehicle. Öhlins Racing AB cannot be held responsible for any personal injury or damage whatsoever that may occur after fitting the front fork kit. Contact an Öhlins dealer for advice.

2. Please study and make certain that you fully understand the contents in the mounting instruction and the owner´s manual before handling this front fork kit. If you have any questions regarding installation procedures, contact an Öhlins dealer.

3. The vehicle service manual must be referred to when installing the Öhlins front fork kit.

NOTE!

Öhlins products are subject to continual improvement and development. Consequently, although these instructions include the most up-to-date information available at the time of printing, there may be minor differences between your suspension and this manual. Please consult your Öhlins dealer if you have any questions with regard to the contents of the manual.

NOTE!

During storage and transportation, especially at high ambient temperature, the oil and grease used for assembling may run out inside the packing and damage the expanded polystyrene packing material. This is not unusual and is in no way detrimental to the Öhlins product.

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ADJUSTMENTS

Adjustments

Compression damping adjuster
The compression adjuster is located at the top of the fork leg. Adjust by turning the slotted screw with a screwdriver.

Rebound damping adjuster
The rebound adjuster is located at the bottom of the fork leg. Adjust by turning the slotted screw with a screwdriver.

Reset the adjusters according to following:

The adjusters have a normal right hand thread. Turn the damping adjusters clockwise to fully closed (pos. zero [0]). To open, turn counter clockwise, and count the clicks until you reach the recommended number. For recommended clicks see Set-up data. Static sag can only be changed with softer or harder spring rate.

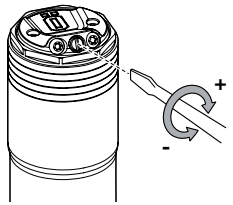
CAUTION!

Do not use too much force, delicate sealing surfaces can be damaged.

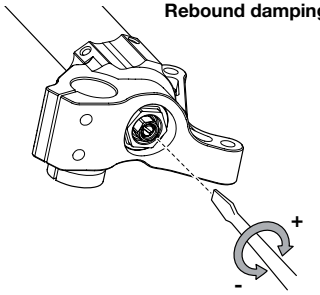
NOTE!

The total stroke of the front fork may differ from the original stroke, so that more or less of the steel tube will be visible when the fork is fully compressed.

Compression damping adjuster

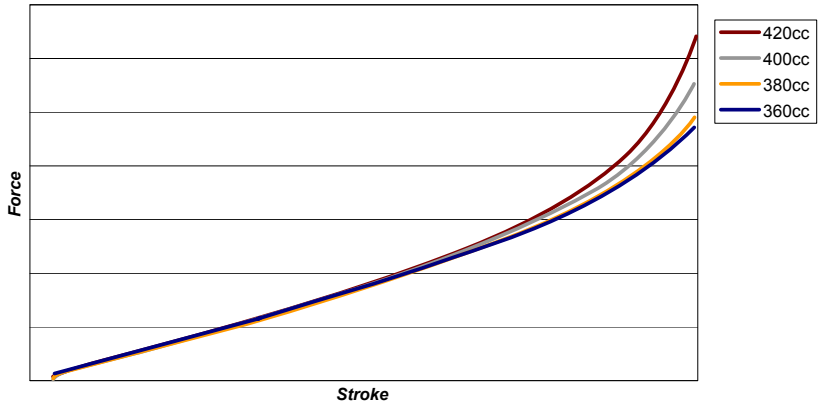


Rebound damping adjuster



DIAGRAM

Oil volume - Force



MOUNTING INSTRUCTIONS

Changing springs (only)

This can be done on the motorcycle with Öhlins special tools. Make your service and maintenance according to Öhlins work shop manual.

1.

Put the motorcycle on a work stand.

2.

Loosen the screws that hold the fork legs in the upper triple clamps.

3.

Open up the top cap on the fork leg. Use a standard fork top cap tool.

4.

Remove the security snap-ring in the bottom of the fork with a pair of pliers.

5.

Loosen the bottom end of the cartridge kit.

6.

Install the tool 01890-01 (oil plug) by pushing it into the fork bottom. The plug will keep the oil in the fork while changing the spring.

7.

Remove the cartridge kit from the fork leg and change the spring. Note the preload washer (if any).

8.

Install the cartridge kit into the fork leg and push out the oil plug tool 01890-01.

9.

Tighten the shaft end into the fork bottom with tightening torque 18 Nm.

10.

Install the security snap-ring.

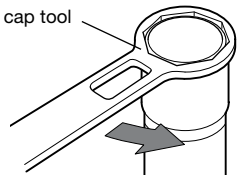
NOTE!

If any oil is needed, use Öhlins Front Fork Oil 01311-xx only.

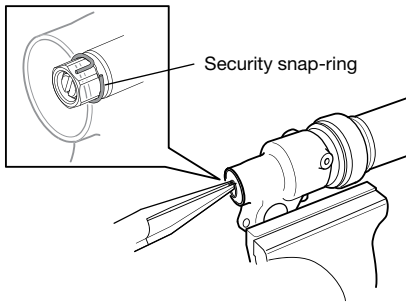
CAUTION!

The top cap should only be tightened by hand or maximum torque of 10 Nm into the fork leg.

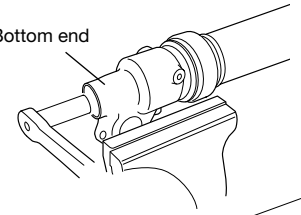
3 Top cap tool



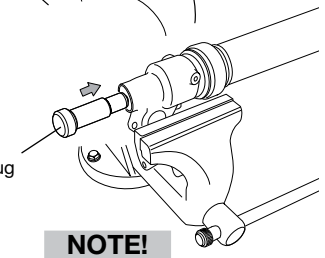
4 Security snap-ring



5 Bottom end



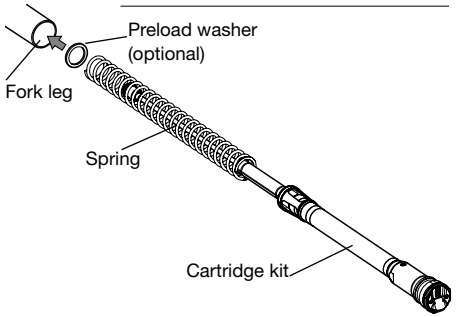
6 Oil plug



NOTE!

The preload washers must be below the spring, at the bottom end of the fork leg.

7



MOUNTING INSTRUCTIONS

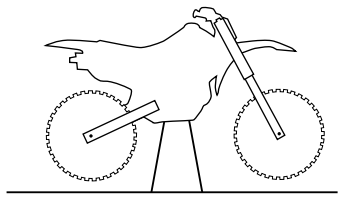
⚠ WARNING!

1. It is advisable to have an Öhlins dealer to install the front fork kit.

2. Refer to the instructions in your vehicle service manual when changing the front fork.

3. When working on a raised vehicle, make sure that it is securely supported to prevent it from tipping.

1



Removing the original front fork

1

Put the motorcycle on a workstand so that the front wheel is off the ground.

2

Remove the front wheel and the brake caliper.

3

Measure the position of the front fork. Measure the distance from the top of the fork leg to the top of the upper triple clamp according to figure.

4

Loosen the upper triple clamp by loosening the screws.

5

Loosen (but not remove) the top cap 1/2 turn. Use a standard tool from the motorcycle manufacture.

6

Loosen the lower triple clamp by loosening the screws.

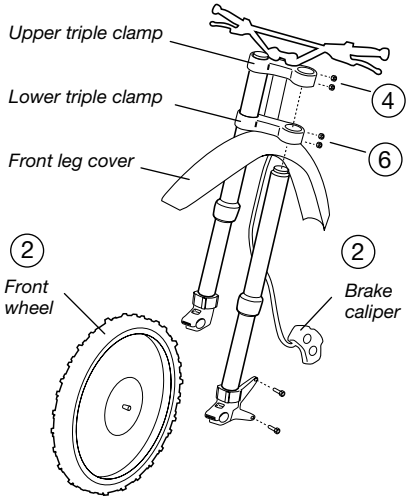
7

Remove the front fork legs from the motorcycle.

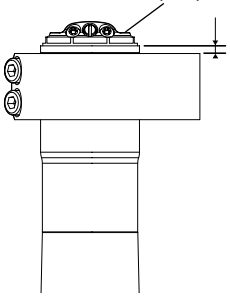
Disassembling the original front fork

8

Follow your vehicles service manual to remove the original front fork kit from the front fork leg. Turn the fork leg upside down to pour out the oil. Clean your front fork internally thoroughly.



3 Top cap



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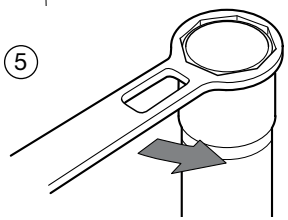


MOUNTING INSTRUCTIONS

Install the Öhlins front fork kit

9

Smear some red grease or similar on the o-rings and install them according to figure.

10

Install and tighten the base valve plug into the fork bottom, use a 20 mm socket (tightening torque 45 Nm).

11

Install the preload washer(s) 15443-xx *(optional - see **Set-up data**, Spring preload),* the recommended Öhlins spring *(see **Spring guide**)* and the cartridge kit into the standard fork leg.

12

Tighten the cartridge shaft end into the base valve plug. Use a 12 mm socket (tightening torque 18 Nm).

13

Install the security snap-ring at the shaft end groove according to figure.

14

Pour Öhlins front fork oil *(01311-xx)* into the fork leg according to the recommended settings. Oil volume range: 0,350 to 0,420 litre.

15

Tighten the Öhlins fork top cap gently. Use the standard top cap tool from the motorcycle manufacture. Handtighten only!

16

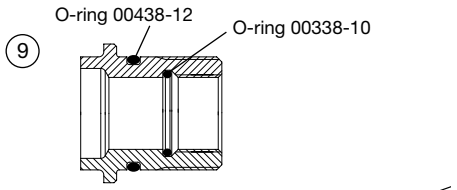
Check and set the rebound and compression valves click positions according to the recommended settings in **Set-up data**.

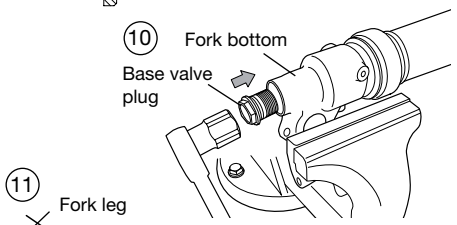
17

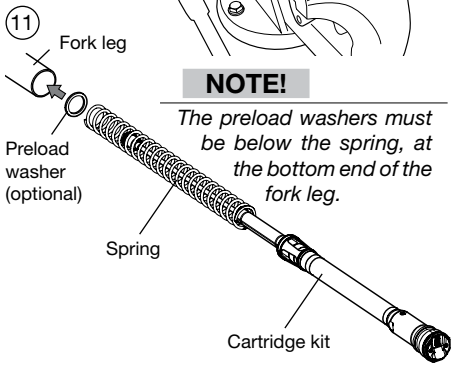
Install the front fork legs into the triple clamps. Tightening torque - see your vehicle service manual.

NOTE!

It is very important that the triple clamps are tightened to the correct torque.

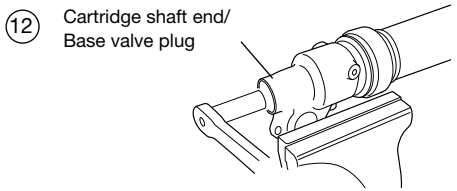


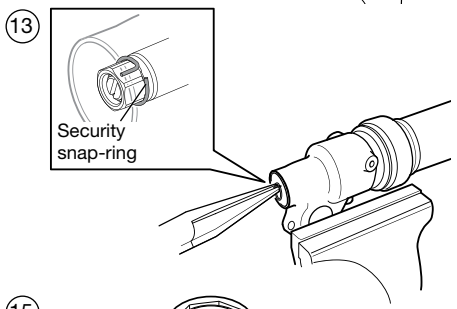


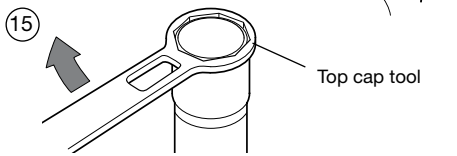


NOTE!

The preload washers must be below the spring, at the bottom end of the fork leg.

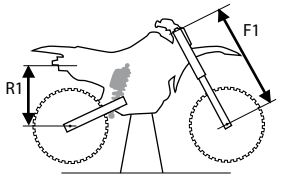




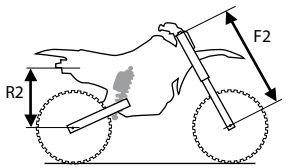


SET-UP DATA

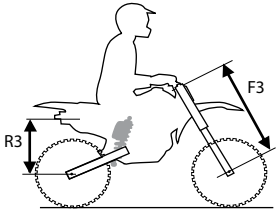
Before riding your motorcycle, check sag and ride height according to **Set-up data** *and* **Adjustments** *in this mounting instruction. To get the most out of your suspension component it is of great importance to make the correct settings for your weight - full riding equipment on.*



Motorcycle on a stand



Motorcycle on the ground



Motorcycle with rider on

Front suspension

F1. Motorcycle on a stand with the suspension fully extended = ...

F2. Motorcycle on the ground without rider = ...

F3. Motorcycle on the ground with rider = ...

Free sag F1 - F2 = ...

Ride height F1 - F3 = ...

Rear suspension

R1. Motorcycle on a stand with the suspension fully extended = ...

R2. Motorcycle on the ground without rider = ...

R3. Motorcycle on the ground with rider = ...

Free sag R1 - R2 = ...

Ride height R1 - R3 = ...

Recommended settings:

Rebound damping	12 click
Compression damping	12 click
Spring preload	-5 to 8 mm (can be changed with washers 15443-02 and 15443-03)
Oil volume for 250F:	0,370 litre
Oil volume for 450F:	0,380 litre

Use only Öhlins fork oil 01311-xx.

Recommended sag and ride height:

If no other recommendations are given in your vehicles manual follow the measures below:

Without rider:

Rear 30 ±10 mm (R1-R2)

With rider:

Front 40 ±10 mm (F1-F3)
Rear 100 ±10 mm (R1-R3)

Spring Preload

Measure the spring length. The springs may differ in length which will affect the preload. The preload can be changed with the preload washers 15443-xx (installed before the spring). A negative preload of up to – 5 mm is possible, because the top-out spring then still gives a small compression load on the main spring.

The preload is calculated as:

A Free spring length
B Preload washer thickness
C Installed length for spring and preload washer

A + B - C = Spring preload

The setup for zero (0) preload is calculated below. An increase of the spring length and/or an increase of the preload washer thickness give a corresponding increase of the preload.

Free spring length:	455 mm
Preload washer (15443-xx):	15443-03 (3 mm)
Preload:	0 mm